

A political ontology of seeds:

The transformative frictions of a farmers' movement in Europe

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Abstract: This article follows the trajectory of a French farmers' movement that contests the seed production and regulation system set in place during agricultural modernization. It focuses on the creativity of the movement, which ranges from semantic innovations (such as "peasant seeds") to the reinvention of on-farm breeding practices based on new scientific paradigms, and includes new alliances with the social movements defending the commons. The trajectory of the movement is shaped by its encounters—with scientists, other international seed contestations, and other social movements—and by the productive frictions they create. This in-depth reframing of the activities connected to seeds contributes to building a counternarrative about farmers and seeds that reopens spaces for contestation. In this counternarrative, "peasant seeds" play a central and subversive role in the sense that they question the ontological assumptions of present seed laws.

Keywords: commons, epistemic advocacy, ontology, peasantness, seeds, social movements

This article follows the trajectory of a French farmers' movement that contests the orientation of the seed production and regulation systems set in place during agricultural modernization. In industrial countries, a professional seed industry has been constituted in the course of the twentieth century, alongside an innovation regime in favor of breeders and a transformation of the nature of plants themselves. These mutations have led farmers to outsource most activities connected to seeds. Attracted by the promises of modernity, most farmers have

progressively abandoned their landraces and converted to improved high-yielding varieties. In doing so, they have also progressively lost their knowledge about plant breeding. Seed legislation at a national and European level has accompanied this movement. In the 2000s, new developments in the anti-genetically modified organism (GMO) struggle and the toughening of seed laws have led an alliance of farmers' organizations in France to create the Réseau Semences Paysannes (literally "peasant seed network"). For seven years I have followed this movement, which seeks to go beyond protest and denunciation and build alternatives to the seed industry. I give an account here of its trajectory in building a counternarrative that reorganizes the relations between breeders, farmers, gene banks, seed industries, and plants.

Conflicts about seeds involve asymmetric forces. An overemphasis on the macrostructure may give the impression that every aspect of people's lives is determined by economic forces. Such accounts have been criticized in poststructuralist political ecology (Peet and Watts 1996: 28–30). Donald Moore, for example, criticizes the assumption that "global capitalism, from this perspective, not only shapes but also exactly determines heterogeneous local histories, cultures, and societies" (1996: 126). Drawing on Gramsci's critique of Marx, Moore calls for an emphasis on "1) the micro-politics of peasant struggles over access to productive resources; and 2) the symbolic contestations that constitute those struggles" (ibid.). The two volumes edited by Peet and Watts, *Liberation ecologies*, are dedicated to filling this gap: they gather studies about the environmental imaginaries emerging from social movements and everyday resistance and their transformative potential (1996, 2004). Engaged in the study of social movements in Latin America, Arturo Escobar defended the idea that social movements are not only about class struggle, but also about imaginaries and counterhegemonies. In his recent work, he goes a step further, arguing that the movements engaged in the contestation of European modernity not only oppose different

“cultural representations” of the world but also, more radically, different definitions of what the world *is*. Their struggles against modernization politics go along with radical critiques of the hegemonic power of modernity to define the world. These conflicts are thus not only social or cultural; they can also be read as “ontological” (Escobar 2010). The worldviews alternative to modernity mobilized in political conflicts can be qualified, after Blaser, as “political ontologies” (2009, 2013).

The concept of “ontology”, defined in the New Oxford American Dictionary as “the branch of metaphysics dealing with the nature of being,” has been used by philosophers of biology to refer to the kinds of objects that there are in the biological sciences (Dupré 2012: 97–100). Dupré shows that the biological sciences illustrate a plurality of ontologies, in the sense that the nature, the boundaries, the properties of the objects studied in each epistemic field differ. Recently the concept has significantly expanded in anthropology, and now commonly refers to “worldviews” (Carrithers et al. 2010). An “ontological approach”, as anthropologists argue, is “one that does not privilege the study of other people’s representations of what we know to be the real world, [but acknowledges] rather the existence of multiple worlds” (Henare et al. 2006, quoted in Carrithers et al. 2010: 152). I highlight the ontological dimension in this seed struggle, drawing on both meanings of the term as biological ontologies and worldviews are connected.

By emphasizing the farmers’ ontology, I seek however to avoid the “essentialization trap”. The tendency to essentialize and romanticize farmers’ knowledge and worldviews still prevails in ethnobiology and environmental anthropology, manifested in the somehow simplistic opposition between farmers’ knowledge and scientific knowledge (Cleveland and Soleri 2007). However, the list of authors and arguments calling for a dismantling of the divide between local and scientific knowledge is increasing (Agrawal 1995). First of all, the literature in science studies acknowledges heterogeneities and discrepancies in the production

of scientific knowledge. It recognizes the existence within academia of different “epistemic cultures” (Knorr-Cetina 1999) and, within disciplines, of different “epistemic communities” (Haas 1992). Some of them are perfectly compatible with the worldviews of nonacademic actors on the ground (Hayden 2003). Further critiques about such a divide come from anthropology. Dove et al. (2007) argue that what is presented as local, traditional, or indigenous knowledge is often the result of recent hybridizations with more academic forms of knowledge; more importantly, the divide can be entertained (and sometimes dramatized) by actors willing to build boundaries between themselves and others, in contexts where alterity happens to be politically productive. Tania Li’s (2000) work feeds into this perspective. She shows that some ethnic groups in Indonesia have seized the political opportunities opened by an international context valorizing the environmentality of indigenous peoples: they have done so by revitalizing their “indigenous” identity, putting forward their “indigenous knowledge”. Drawing on Stuart Hall’s work on identity making, for whom identity is “subject to the continuous play of history, culture and power,” Li interprets indigeneity “not [as] an essence but a positioning” (Hall 1990: 225–226, quoted in Li 2000: 169).

A similar analysis can be made about “peasantness” in the European and French contexts. In its classical use in social sciences, peasantness is a positive category that can be objectified by the researcher, for example, as a farming activity aimed at self-subsistence and cultural survival (Edelman 2013). For other researchers, myself included, it is a category mobilized by farmers (an emic category) to position themselves on the farming chessboard. Edouard Morena’s (2011) research on the French Confédération Paysanne, for instance, describes the way the left-wing farmers’ union has put peasantness at the core of its project, as a way to equip its struggle against the modernization of agriculture. This is also what is at stake in the international union La Via Campesina, which has self-appropriated the Spanish

term *campesino* (Edelman 2013). In this constructionist perspective, it is more relevant to focus on processes of repeasantization—defined as “struggles for autonomy” (van der Ploeg 2008; Da Via 2012)—than on the essence of peasantness. Hence my preference for a pragmatic approach that focuses on the trajectory of the movement over time and describes what results from the process, identity positioning included (Chateauraynaud 2009).

The first section below presents the historical context of the creation of the Réseau Semences Paysannes (RSP): this allows me to set the stage of the dominant narrative about seeds in modern agriculture and describe the political project associated with the creation of the expression *semences paysannes* (literally “peasant seeds”). I then approach the collective learning developed through practical engagement with seeds and plants. The following sections deal with the encounters and dialogues with other actors: researchers and other social movements. Each of these confrontations leads to “frictions”, that is, tensions, but also certain reconfigurations (Tsing 2005) that offer ways to refine and consolidate what “peasant seeds” are. The conclusion sums up what results from the history and contingencies of these multiple encounters. The trajectory of the RSP creates a new narrative about seeds that competes with the hegemonic narrative within the modern agriculture model. I argue that the concept “peasant seeds” can be read as a political ontology, which opens up new balances of power and legitimacy in the politics of seeds.

The invention of “peasant seeds”

As in other European countries, the French agricultural system went through a radical process of modernization after World War II. To face the urgent challenge of feeding a hungry population, the French state prioritized increasing agricultural productivity. To this end, the state created the French National Agronomic Research Institute (INRA) and organized farm

extension services. Farmers were actively encouraged to mechanize their production tools, use chemicals, and adopt improved high-yielding varieties.

Already two decades earlier, however, breeding had started to develop as a professional activity. At that time, new professional breeders devised methods inspired by state-of-the-art agronomy, which considered “pure lines” (i.e., genetically uniform lines) as the most perfect forms of cultivar (Bonneuil and Thomas 2010). Genetic uniformity and stability was seen as permitting a standardized and highly productive yield, predictable throughout time and space, meeting the requirements of industrial rationality.

In the field of seed legislation, an Official Catalogue of Species and Varieties was created in 1932 in France in order to protect breeders’ interests. Over time, the catalog became an instrument for “genetic progress”: a criterion of productivity was introduced in 1945, which contributed, year after year, to the exclusion of landraces. A decree of 1949 stated that only the varieties listed in the catalog could be sold on the seed market. Any other kind of genetic resources became illegal on the French market. In 1961, the catalog no longer included any wheat landraces (Bonneuil and Thomas 2009). The only varieties remaining were the modern ones, all meeting the DUS (distinct, uniform, stable) standard. The International Convention for the Protection of New Varieties of Plants signed in 1961 set up the International Union for the Protection of New Varieties of Plants (known under the French acronym UPOV) to serve as an international regulatory framework to protect breeders’ intellectual property rights. UPOV 1961 provided that users of a variety protected by a Proprietary Variety Certificate should pay royalties to the breeder, though it still allows breeders to freely use the variety for further breeding (the so-called breeders’ exemption) and farmers to use the harvest for propagating purposes. In the European Union, the Proprietary Variety Certificate was combined with the creation of a Common Catalogue following the same principles as the French catalog.

With these changes farmers in industrialized countries progressively became end users of improved varieties designed and produced by seed companies. A Fordist division of tasks was organized between breeders, multipliers, producers, and upstream genetic resources collections to insure, respectively, the obtaining of improved varieties, production of certified seeds, crop production, and conservation of genetic resources (i.e., the raw material for breeders). The proportion of seeds purchased regularly increased from 10 percent after World War II to 50 percent in the 1980s.

In the 1980s, the price of grain dropped. In spite of a law passed in 1970 in France that forbade farmers to reseed part of their harvest, farmers returned to saving seeds in order to make ends meet. The plant breeders felt that farmers were competing with them, as farmers increasingly turned to small seed-cleaning businesses for sorting and cleaning their farm-saved seeds. The first lawsuit brought by plant breeders against these practices was won in 1988, provoking the anger of farmers. In 1989 an agreement was signed between the Ministry of Agriculture, plant breeders, and representatives of the largest agricultural union to limit seed-saving practices by forbidding seed-cleaning businesses. This led to the creation of the *Coordination nationale pour la Défense des Semences de Ferme*, an organization defending the principle of seed saving.

The revision of the UPOV Convention in 1991 also limited farmers' rights to save seeds. UPOV 1991 made seed saving a "farmers' privilege" that states could grant or withhold. The principles of this convention inspired the 1994 European Union seed law: it authorized seed saving for a given list of species but provided that seed savers should pay royalties to contribute to varietal innovation.¹ Organic farmers' rights to save seeds was moreover complicated by further changes, in late 2002, to the French seed laws, demanding that organic farmers show evidence that the seeds they use are organically produced. The problem is that only certified seed companies can provide such pieces of evidence, whereas

organic farmers usually prefer to produce their own seeds. Indeed, many organic farmers consider that commercial varieties do not respond to their agronomic needs, as they are bred *in* and *for* conventional farming systems, and are not adapted to the specificities of low-input forms of agricultural production. This new state of affairs led left-wing farmers' movements already engaged in the anti-GMO struggle to go beyond protest and denunciation and to imagine alternatives to commercial seeds.

The Réseau Semences Paysannes was set up in 2003 at the crossroads of the aforementioned movements (farm-saved seeds, defense of organic farming, anti-GMO), with organizational support from La Confédération Paysanne. It calls for the defense of farmers' rights to cultivate and exchange seeds from varieties that are not included in the official catalog, in the name of farmers' sovereignty and agrobiodiversity conservation. It was during this period that the expression *semences paysannes* (literally "peasant seeds") emerged and was popularized, replacing, in activist discourses, the notion of *semences de ferme* or *semences fermières* (literally "farm seeds", which means farm-saved seeds). This shift in vocabulary aimed to promote a radical change in farmers' practices; farmers would not only multiply seeds on the farm but, more ambitiously, also regain a complete autonomy of seed activities. To do so, they would revive landraces or heritage varieties abandoned during the modernization process. Thus, "peasant seeds" would not only differ from commercial seeds in terms of their origin of production (as would be the case for farm-saved seeds), but also in terms of their genetic identity and agronomic characteristics.

By purposely using the term "peasant" in "peasant seeds", the leaders of the Réseau Semences Paysannes (most of them close to La Confédération Paysanne) were able to link the struggle over seeds to their own promotion of the peasant as an alternative to industrial agriculture. Why "peasant"? In the 1960s, sociologist Henri Mendras theorized the "vanishing of the peasants", how modernization had replaced peasants with *exploitants*

agricoles (agricultural managers). For Mendras, the change in terms used to qualify the farming profession in the 1960s and 1970s points to a fundamental mutation of their professional knowledge, forms of sociability, insertion in the economy, and relation to nature and to the land (Mendras [1967] 1970). In common language as well, the term *paysan* remains associated with an attachment to tradition, whereas *agriculteur* (farmer) and, even more, *exploitant agricole* evokes industrial efficiency and rationality.

Calling somebody *paysan* has long remained dismissive, but this changed in the 1980s, when left-wing farmers' unions rehabilitated the term by associating it with their critique of the excesses of modernization (Morena 2011). Today the term *paysan* appears in the name of several critical movements, notably La Confédération Paysanne, which, created in 1987, promotes an alternative farming model (*agriculture paysanne*) that can reclaim autonomy from the agri-food sector. The semantic innovation that produced the notion of "peasant seeds" also allowed the RSP to "name" a new cause—the first step in effective mobilization (Felstiner et al. 1980). "Peasant seeds" named the cause of farmers who were becoming increasingly dependent on the seed industry, who were losing their ability to make their own agronomic choices, and who in reaction were trying to revive older on-farm autonomous breeding practices.

"Peasant seeds" as a community of practice

"Peasant seeds" is not simply a linguistic innovation. The expression's widespread adoption has been followed at the grassroots level by a long and patient engagement to construct the practical meaning of "peasant seeds". The RSP relies on grassroots initiatives begun by farmers who have been attempting (some of them since the 1970s) to develop alternatives to the purchase of commercial seeds. Most of them are small-scale organic farmers involved in short distribution chains (direct-from-farm sales or farmers' markets). They often have

multiple activities, especially on-farm processing (milling and baking in the case of wheat producers; cheese making in the case of cattle raisers), which is a way for them to follow the product all along the production chain and to produce added value. They are scattered all over France, though less in regions that specialize in monoculture. They are not all involved in the union La Confédération Paysanne, but all of them would join together under the banner of “peasant agriculture”, which values autonomy, local development, social fairness, and respect for the environment.

Their initiatives are driven by a diversity of motives, from the preservation of local heritage to the search for varieties adapted to specific agronomic needs, special transformation modes (e.g., ancient processing techniques), or harsh environments (e.g., farmers cultivating on poor lands). The short distribution chains allow for the exploitation of niche markets that value the diversity or originality of artisanal products (such as bread made from ancient wheat landraces).

The creation of the RSP aimed to deconfine these scattered experiences, to gather them into one struggle against the hegemony of the seed industry, and to unite them around the construction of an alternative to the dominant model. The first step was to create working groups, divided by groups of species (the most active now are wheat and straw cereals, maize, and vegetables), whose mission was to organize workshops and visits to farms, with activities such as training, information and experience sharing, and seed swapping. Such activities encouraged a diffusion of rare varieties, the pooling of tools (seeders, sorters), collective learning regarding seed production and ancient varieties cultivation, collective problem solving to overcome juridical difficulties,² fund-raising, and institutional recognition.

In a previous article, a colleague and I described at length the “community of practice” that emerges from such seed sharing (Demeulenaere and Bonneuil 2011). By

following the seed circulation, we showed that the network mainly consists of farmers but also involves actors occupying different positions, such as curators of genetic resources collections or researchers at INRA, who provided seed lots from the collections they have access to and then kept in contact with the farmers' network. Despite these differences in status, there is a strong will in the network to avoid the hierarchical relations that prevail in conventional agricultural research and extension services. As with a peer-to-peer system, every participant who receives a seed lot is invited to contribute one in return. This moral obligation of reciprocity expresses the principle that there is no task specialization: breeding and multiplying seeds should be accessible to anyone, and the construction of a "peasant seed" community should be a collective effort.

What circulates is not only seed lots, but also advice about the best way to treat and cultivate them, and even stories about their "social life" in the network. Indeed, ancient varieties and landraces display specific and diverse agronomic characteristics that contrast with the relative uniformity and predictability of modern varieties. Their cultivation requires some experience and observation of their agronomic behavior, over time and across regions. The concept of "community of practices" coined by Wenger (1999) perfectly addresses and articulates the social and practical dimensions of this collective learning process. The mutual engagement of people in a joint enterprise translates into the creation of a common repertoire, which crystallizes the negotiation of a common meaning. Indeed, the community resulting from the peasant seed-sharing practice shares more than seeds, such as common values and ideals about the type of sociability (peer-to-peer), the relation to plants (the importance of the singularity and alterity of plants), and the agricultural model (peasant agriculture).

“Peasant seeds” as genetically heterogeneous and dynamic entities

As mentioned earlier, the network involves, among other actors, researchers. The first reported encounter between the RSP and researchers happened at the founding meeting of the movement, where geneticists, historians of science, lawyers, and curators were invited. To illustrate the difficulties and efficacy of the encounter between scientists and farmers, we can look at Isabelle Goldringer, a researcher on the genetics of bread wheat at INRA who attended the meeting. After she completed her PhD in 1993 on a classical breeding technique, Isabelle worked on a national-scale experimentation initiated by P.-H. Gouyon, A. Gallais, and J.-P. Henry in the 1980s on the natural evolution of a cultivated crop. The experiment was pioneering, as natural evolution has mainly been studied empirically on wild species. The experimental design was as follows: a sample of bread wheat seeds (called Megamix, resulting from the mixing of 16 landraces) was divided into 7 lots, which were cultivated year after year in 7 agronomic stations distributed across French territory. Following the terminology adopted in population genetics, seed lots from each site are referred to as “populations”, and the 7 populations as a whole are referred to as a “metapopulation” (Levins 1969). PhD students supervised by Isabelle analyzed the natural evolution of the 7 populations over 12 years as they adapted to bioclimatic conditions resulting in a diversification due to local adaptation and in an increase in biodiversity at the level of the metapopulation compared to the original pool (Goldringer et al. 2001).

In the 2000s, the agronomic stations involved in the experiment were finding it difficult to cover costs. It was at the moment when the long-term survival of the program was being questioned that Isabelle met the farmers’ movement. Their project to reappropriate seeds surprisingly coincided with the “dynamic management of agrobiodiversity” that her research community promoted. Hence, the development of the farmers’ network provided her and her team with a rather unexpected open-air field trial (Enjalbert et al. 2011).

Yet the first interaction between Isabelle and the farmers at the founding conference of the RSP did not go very smoothly. After a farmer presented his approach, she asked: “What are your breeding criteria?” The question was not meant to be aggressive, but it was badly received, for it implied the conventional presumption that breeding, cultivating, and conserving are separate activities. Isabelle’s research community works on crops, but with inspiration from a research field that first developed the metapopulation concept from the study of wild biodiversity. Her conception was thus strongly anchored in a neo-Darwinian perspective, in which evolution is seen as the result of natural selection. The integration of farmers’ practices into the crop dynamic management model was unprecedented for her; thus, she framed her question borrowing from the breeders’ conception of crop management. For the farmers, though, there is no clear divide between purposive selection and farming practices that result in the slow evolution of the plants. Instead of having clear criteria, they rather say they “accompany the wheat”; they “favor” the phenotypes they like the most.

The motivation to collaborate was strong enough on both sides to overcome the difficulties of the initial contact. After that encounter, the studies conducted by Isabelle and her students took the genetic resources circulating in the farmers’ network as a new object of investigation: by analogy with the dynamic management experiment, each variety cultivated in a farm was seen as a “genetic population”, the exchanges from farmers to farmers were interpreted in terms of “genetic flows”, and the whole network of varieties represented a “metapopulation”. In a pioneering way, their research on the genetic consequences of on-farm seed management integrated human practices into the “metapopulation” model.

Isabelle also worked hard to obtain funding to study the complementarity between “static conservation” in genetic resources collections and on-farm “dynamic management” of agrobiodiversity. This was a first step (and a diplomatic way) to get on-farm conservation recognized in France. The results published in an article signed by the whole team, including

the farmers, show a much wider diversity in the fields and give rise to recommendations about genetic resources conservation policies (Demeulenaere et al. 2008; Thomas et al. 2012). One year after publication, the RSP was invited to join the steering committee of the Foundation for Research on Biodiversity (FRB) as a “biodiversity stakeholder”.

Besides this institutional recognition, the population genetics approach also provided new insights into the farmers’ movement. First of all, the theory of population genetics relies on a representation of living matter as evolving. Such a representation offers scientific arguments to contest the industrial ideal of obtaining fixed plant varieties. This is something that farmers would empirically perceive, but that the genetic perspective helps objectify. As one farmer expressed it: “[T]his idea that the living matter should be ‘uniform and stable’, that’s just nonsense!” For population geneticists, varieties are “pure lines” only in theory. In practice, there is always a certain genetic heterogeneity remaining between plants recognized as belonging to the same registered variety. The criteria of uniformity examined and discussed by the Technical Committee of the GEVES (French Variety and Seed Study and Control Group), in charge of registering new varieties, is only relative (Bonneuil and Thomas 2009). In short, varieties have no natural boundaries; they are, rather, a social construct, negotiated and stabilized by the institutions in charge of the plant breeding regulations. The scientific object—or ontology—population geneticists would put at the center of their study instead is the “population”, defined as a pool of plants cultivated in the same field and that can crossbreed. When the individuals of a population share common phenotypic traits, then the whole can be called a “variety population”.

Over several years, evolutionary conceptions influenced the practices of farmers cultivating heritage varieties. Geneticists speak about genetic resources collections as creating an “evolutionary freeze”. For them, ancient varieties coming out of collections are still adapted to the contexts in which they were historically cultivated; it is not unfounded,

thus, in the perspective of their recultivation, to seek their readaptation to contemporary conditions. Some farmers have now embraced such a conception to the point that they have started to mix landraces together with the idea of creating their own locally adapted blend in the long term. A technician from the INRA has even taught some of them some “accessible-to-farmers” methods to cross plants, which permits even more variability at the beginning of the process of local adaptation.

In addition, population genetics has provided farmers with a scientific vocabulary to objectify and make more explicit their practices. This has been of great importance, as the vocabulary borrowed from the conventional world of genetic resources conservation and plant breeding traps actions and actors in erroneous conceptions or irrelevant divides. For example, conservation in its literal sense means keeping things identical. An expression such as “in-situ conservation” does not properly capture the dynamic dimensions associated with on-farm management. The same remark can be made in regard to “genetic resource”, which sounds more anthropocentric than “agrobiodiversity”. Furthermore, for a breeder, conservation is a distinctive activity separate from other activities of the genetic resources processing chain, such as breeding, multiplying, and producing.³ However, on-farm seed management intertwines various motives and includes all these activities. Being aware of these pitfalls encouraged the leaders of the RSP to avoid words commonly used in institutional arenas dealing with genetic resources, conservation, or plant breeding (because they implicitly refer to a division of tasks and to power relations that the RSP contests), and to rather draw on words inspired by population genetics for their advocacy. They would speak, for example, of “on-farm maintenance and renewal of agrobiodiversity” instead of “genetic resources conservation and breeding”.

The example of Isabelle perfectly illustrates the “productive frictions” between the farmers’ seed contestation and an academic field, in this case population genetics. The

encounter between an INRA researcher and the farmers was potentially contentious, but it led to a long-term and fruitful collaboration. On the one hand, the scientists got a new field in which to demonstrate the relevance of their scientific approach. On the other hand, the movement has gained legitimacy and become equipped with new scientific arguments and a renewed vocabulary. In this collaboration, scientific and political engagements closely intermingle. When crop population geneticists defend their research field, they implicitly bring a critique of agronomic research policies and the priority given to biotechnologies at the expense of approaches favoring agrobiodiversity, and ways of doing research valuing a plurality of knowledges. Conversely, the project of the RSP is primarily political but requires the support of rational arguments and scientific knowledge, to which researchers, among other actors, are welcome to contribute.

The RSP has interacted with other academics and with other research fields. Some of these interactions did not produce anything, while others have been significant in the development of the RSP. These include Christophe Bonneuil and Frédéric Thomas, historians of science, who have worked on the history of plant breeding in France and described the construction in the last century of the present seed regulation (Bonneuil and Thomas 2009); Shabnam Anvar, a lawyer and author of a PhD dissertation on French seed regulations (Anvar 2008); Véronique Chable, an INRA research engineer who gave farmers access to the cabbage genetic resources conserved at her INRA research center in Rennes and is now very active in raising funds and coordinating research projects on participatory plant breeding; Laurent Hazard, an INRA researcher developing participatory breeding on forage species; and Jean Koenig, Audrey Didier, and François Balfourier, curators of the national straw cereals genetic resources collection, who gave access to many wheat accessions and accepted in return seed samples issued from the farmers' fields (Didier et al. 2012). All of these actors

have contributed to shape the movement and enriched its argumentation. They have become intellectual allies, or at least inspirations, for the farmers' movement.

Some "companion researchers" (as the leaders of the RSP would call them) have been more actively engaged in an "epistemic advocacy" (Hayden 2003) for "peasant seeds" via research projects whose names are evocative.⁴ The academic production derived from these collaborations articulates to various degrees the values of agrobiodiversity conservation, defense of a diversity of farming models (in particular of organic farming systems), and defense of farmers' seed autonomy. Besides agronomic, ecological, and genetic arguments, these sometimes address the legal difficulties involved (Serpelay-Besson et al. 2011; Dawson et al. 2011; Bocci and Chable 2009). This results in a multidimensional but coherent advocacy for on-farm agrobiodiversity dynamic management, be it collaborative or farmer-led.

These close collaborations developed with researchers, some of them from INRA, the research institute designated as responsible for technology-oriented agricultural modernization and that has downplayed the professional experiences and knowledge of farmers, have resulted in an ambivalent positioning toward science. Situations subsist where it remains productive to play out the distinctions between farmers' knowledge and scientific knowledge. In 2010, for example, in the context of an experience-sharing workshop about plant participatory breeding, a farmer took the floor in front of a dozen of farmers and "companion researchers" and expressed the specificity of his approach as holistic, sensitive, and not reducible to the investigations of researchers.

This illustrates how farmers in some cases would insist on the "conceptual and moral dissonance and autonomy between knowledge systems" (Leach and Fairhead 2002: 299), rather than insisting on the continuity between their and scientific approaches. In other cases they would, on the contrary, present themselves as "peasant researchers" (*paysans-*

chercheurs). This makes sense when one remembers that autonomy is at the core of the process of repeasantization. The RSP acknowledges close partnerships with scientists, but still claims the intellectual autonomy of their project.

“Peasant seeds” as a natural commons

The situation of seed laws in France results from multilayered regulations decided at different scales (national, European, international) and connected to different issues (intellectual property rights, agriculture, biosafety, biodiversity conservation, food security, farmers’ and indigenous rights). Facing the multiplication of arenas where the future of seeds is discussed and negotiated, the RSP has opened many lines of dialogue with seed contestations from other geographical areas and with other social movements advocating for supposedly convergent causes. I will here report on these encounters, on the frictions they have provoked, and on the way they have contributed to fine-tuning the project of “peasant seeds”.

At quite an early stage, the RSP made efforts to build international connections with other seed contestations. In 2005, the RSP organized a first “European workshop on seeds” in Poitiers, France, whose rallying slogan was *Libérons la diversité!* (Let’s liberate diversity!). Here, 150 participants from 36 countries around the world attended and deliberated on the rights of farmers to produce and share seeds. One of the issues discussed was building a strategy to promote GMO-free regions at the European Parliament. At that time, the idea had already emerged to consolidate a European network to build a common advocacy for a legislation framework favorable to on-farm conservation of agrobiodiversity. This first meeting led to a series of others across Europe (one per year), in Bullas (Spain), Halle (Germany), Ascoli (Italy), Graz (Austria), Szeged (Hungary), Strathpeffer (Scotland), and Basel (Switzerland).⁵ The session in Hungary in 2011 led to the creation of an official organization, whose founding members include the French Réseau Semences Paysannes, its

Italian homologue Rete Semi Rurali, the Spanish Red de Semillas, the Swiss foundation for plant and animal heritage and genetic diversity, ProSpecieRara, and the Scottish Crofting Federation, as well as others (Crocevia, BEDE, Peliti, etc.). It was named the European Coordination Let's Liberate Diversity! probably for lack of agreement on which expression (farmers' seeds, farm seeds, peasant seeds) to adopt.⁶ Indeed, the vocabulary agreed upon within each of these national movements (*paysan* in France; *agricultores* in Spain; *il mondo rurali* and *le campagne di tutto il mondo, e dagli agricoltori, prima di tutto* in Italy; "crofters" in Scotland) refer to semantic categories that only partially overlap. This is due to language differences, but also to different national agricultural contexts and different strategic use of words (Leach and Fairhead 2002). The term "crofter", for example, is intimately linked to the rural history of Scotland and does not have an easy translation.

Given the impossibility of capturing the richness of situations within one single and unified expression (which would have been difficult to translate properly in different European languages anyway), it was easier to agree on a rallying slogan celebrating diversity. Let's Liberate Diversity! functions thus as a coalition, based on the respect and recognition of national specificities, and does not prevent its members from sharing common values and a strong will to produce common positions that can weigh on EU seed legislation.

What we learn from the constitution of this European coalition is that the semantic innovation *semences paysannes* does not cross linguistic borders easily. The only documents that come up from an Internet search on "peasant seeds" (in English) are documents explicitly translated from French, or documents produced by La Via Campesina, an organization in which Guy Kastler, one of the most influential leaders of the RSP, is involved as a member of the Biodiversity and Genetic Resources committee. The most recent English brochures of the RSP talk instead of "farmers' seeds". This confirms the deep embeddedness of the narrative of "peasant seeds" within the French and Francophone context.

From its very foundation, the RSP has mobilized associations and nongovernmental organizations (NGOs) not directly related to the farming world, but inclined to back its struggle for seed autonomy. This includes gardeners involved in safeguarding biodiversity, rural development actors, and the large nebulous community involved in alternative agri-food networks. At present, the cause is supported by a large public not directly engaged in activist work but still aware of the threats to the right to reseed.

Public awareness about seed issues was largely raised in France by the multiple and mediatized lawsuits against Kokopelli, an association promoting the conservation of plant diversity through the “liberation of seeds”. Nevertheless, and despite similar engagements, the connection between the RSP and Kokopelli did not work well. Kokopelli’s main activities are to train people to breed their own seeds and to sell on the Internet heritage seeds produced by a network of producers. Within the program Seeds without Borders, they also send seed lots to small communities all over the world, with the aim of helping them restore their seed autonomy. The Réseau Semences Paysannes, however, supports changed seed regulations, not the suppression of any regulation. One issue at stake here is the need for regulations to counter and control the introduction of GM plants. As a consequence, it strongly disagrees with the idea that seeds should circulate completely freely.

This tension was best exemplified by a dispute between the two organizations during the preparation for a common action in Brussels (17–18 April 2011). This action was organized in the name of a coalition called Seed Sovereignty, created at the initiative of German and Austrian associations after Graz’s 2010 Let’s Liberate Diversity! conference. It took place just prior to the consultations organized in May 2011 to prepare for reform of the EU seed laws (a still ongoing process in 2014). The first version of the slogan for the campaign was “Free the seeds”, which Kokopelli supported. The RSP was invited to join the coalition, but strongly disagreed with the slogan, which suggested that the campaign was

fighting against the principle of any regulation. The agreement was to instead use the slogan “Free our seeds” (the group of people referred to by “our” being vague enough to satisfy all organizations). Nevertheless, during the march, the protestors, unaware of such subtleties, chanted both slogans.

The recent intervention of Vandana Shiva’s famous NGO, Navdanya, at the invitation of the European Greens, in the debate on the European Commission’s new legislative proposal “on the production and commercialisation of seeds” further blurs the position lines. In October 2013 the Greens and Navdanya launched a Seed Freedom Campaign, which denounced the “restricting and reducing [of] agro-biodiversity and the free access to seeds for farmers and citizens” and called for a rejection of the current European Commission proposal (<http://www.seedfreedom.eu/>). This radical critique strategy was discussed and rejected by the RSP, which pronounced itself more in favor of a subtler lobbying to improve some key elements of the text.

These tensions echo other discrepancies that the RSP faced when it met with other organizations in France advocating for the development of the commons. I will present these discrepancies here, as they helped refine the project and the advocacy of “peasant seeds”.

In its strategy to counterbalance the power relations with seed corporations, the RSP revived the narrative according to which crop genetic diversity is (and has been) constructed, enriched, and maintained by farmers’ communities. Quite early in the development of the RSP, a project emerged to make a connection to and comparison with other movements facing similar issues, such as open-source software movements, which are supported by large creative communities. Both movements have in common values of sharing and cooperation. Beyond the self-evident homology between peer-to-peer computer scientists and farmers’ communities, the aim of a common workshop in 2005 was to more closely examine the heuristics of the comparison between open-source software and “peasant seeds”. However,

the very nature of the objects rapidly appeared problematic. As Guy Kastler, a leader of the RSP, put it in an interview in 2005, in the analogy between “peasant seeds” and open-source movements, “the genetic code is seen as equivalent to the computer code, and the seeds would then be the equivalent of the propagating material, i.e., floppy disks.” But one can easily imagine how the image of seeds as floppy disks propagating identical copies of original genetic information is far from adequate for explaining the “peasant seed” model, where living matter is perceived as adaptable and evolving. The open-source analogy, rather, corresponds to the 1961 UPOV model, in which varieties are ideally stable and homogenous, and can thus be identically multiplied under certain conditions comparable to a copyright, but remain at the same time open to further breeding and to private copying (i.e. on-farm seed-saving).

In the academic world, the idea that there could be an open “peer-to-peer genetics” has raised great enthusiasm (see Bertacchini 2008; Kloppenburg 2010; Deibel 2013). Transposing the open-source licenses developed by the open-source community to seeds has been the intellectual ambition of scholars such as Jack Kloppenburg, a founder of the Open Source Seed Initiative (OSSI). Yet its practical implementation reaches certain limits, raised by Kastler in informal conversations and acknowledged by Kloppenburg in a recent publication: it relies on cumbersome legal and technical tools, perceived at the farmers’ level as the “tools of the master” and regarded as inappropriate for life forms and ultimately destructive of customary arrangements (Kloppenburg 2014).

In February 2013, another workshop was organized at the initiative of the RSP to open a dialogue with advocates of the “knowledge commons”, a community struggling against enclosures created by intellectual property rights. The purpose of the workshop was to explore common arguments and strategies to fight abusive dispossession by intellectual property rights, a process at stake in different domains such as drugs, software development,

knowledge, and plants. About 20 people attended (including researchers, activists, and Green members of the European parliament) and discussed various issues, such as gene patenting in the health sector, copyright vs. copyleft, rights to access to medicine, information commons for eScience, and technical barriers to seed saving and market access for natural treatments (instead of patented herbicides).

The “knowledge commons” advocates usually refer to the work of Elinor Ostrom. Her research was a response to the caricatured dichotomy developed by Garrett Hardin between private property and open access. She developed her Institutional Analysis of the Commons, a frame of analysis that distinguishes for each shared resource the regime of property (characterized by “bundles of rights”) and the mode of governance (including group boundaries and excludability, rules of access, conditions of enforcement, deliberation, and decision bodies). This approach clarified common confusion between the existence of a regime of property and private appropriation in asserting that the collective management of a resource can be based on a regime of property (Ostrom 1990). Nowadays Ostrom’s theory has become both analytic and normative, in the sense that studying the management of a commons often goes together with a moral support for collective action. It was first elaborated on localized natural resources (such as pasture, fisheries)—so-called common-pool resources—and was progressively extended to other kinds of resources, such as global climate or information. Nevertheless, the reappropriation of Ostrom’s theories by social movements in the informational sector reintroduced some confusion, as the discussions with the “knowledge commons” activists showed that day. Indeed, contrary to natural resources, knowledge does not run out when it is shared (economists would call it a “nonrival” resource): hence, for those who believe in values of sharing, it is sensible to claim an access to knowledge as large as possible, ideally universal. Being against private appropriation of knowledge thus often becomes equivalent to defending the constitution of a large public

domain of knowledge. However, the RSP does not embrace the idea that agrobiodiversity is or should be a public good: this discourse is typically held by genetic resources collections and tends to make the contributions of farmers invisible (Halewood et al. 2013). The actors of a farmers' reappropriation of seeds rather promote an approach in terms of farmers' collective rights, not distinctive from Ostrom's first works on local natural resources. As a consequence of this clarification, *semences paysannes* are now sometimes presented in press communiqués as "a natural commons", even if the term "natural" may counter the previous efforts to make the farmers' contributions visible.

Conclusion: "Peasant seeds" as a political ontology

In this article I have described the trajectory of a farmers' movement engaged against the seed production and regulation system built during the agricultural modernization process. Its efforts to build "peasant" alternatives correspond to a will to produce a shift in conceptual categories and lines of legitimacy. Indeed, in the dominant narrative, the activities of conservation, breeding, multiplication, and food production are separate. In charge of these different activities are, respectively, genetic resources collections, breeders, multipliers, and farmers. Farmers are thought of as end users of improved varieties bred for them by professionals whose primary aim, in the context of agricultural modernization, is to increase productivity. The varieties produced in this system must be genetically uniform and stable, in line with the standardization ideal of the industrial model. The intellectual property rights put in place, in the form of successive versions of plant breeders' rights, are justified by the need for breeders to get remuneration from their innovation investments. In return for the royalties they pay, the farmers benefit from the "genetic progress". In this narrative, seed savers are seen as free riders (benefiting from the genetic progress but not paying for it). Following this logic, it is legitimate either to forbid or to tax the seed-saving practice.

In the “peasant seed” narrative, farmers carry out together all activities related to seed management on the farm. Their collective management leads to genetically heterogeneous varieties (populations) with a high potential for local adaptation. There is no “one-directional genetic progress”, as every farm has its own agronomic and organizational needs and preferences. Genetic diversity is valued instead of, or together with, productive performance. In this counternarrative, farmers contribute to enriching the global crop biodiversity, which can be used as a resource for breeders. Hence, they provide a service for which they can legitimately claim rights to. Backed by La Confédération Paysanne’s political project of an alternative “peasant agriculture”, peasantness lies at the core of this narrative. This does not necessarily mean that the movement only mobilizes resources from the peasant world—if such a world exists as such. On the contrary, the movement has sought resources and support from other sociocultural spaces, such as academic research or other social movements. In the present French context, claiming to be “peasant” has a political meaning, which includes both a critique of agricultural modernization and a struggle for farmers’ autonomy through the reconstruction of local links and attachments, to people and to living matter.

Upon the creation of the RSP, the expression “peasant seeds” was just a catchword referring to a wide variety of alternative practices to purchasing commercial seeds. Along the trajectory of the movement, it has become a community of practice. The encounter and long-term dialogue with population geneticists has allowed the RSP to reframe “peasant seeds” as a heterogeneous and evolving material, containing a high potential for local adaptation and diversification. The metapopulation paradigm borrowed from genetics has tooled and consolidated the farmers’ conception, and has offered it a scientific legitimacy. Finally, frictions with other social movements and seed contestations have permitted the RSP to place “peasant seeds” within the “commons” narrative.

As a result of this trajectory, the farmers of the RSP not only contest the balance of power in seed laws, but also question more radically the ontological assumptions of those laws. Indeed, helped by a close dialogue with scientists, they contest the relevance of the boundaries and properties of the supposedly pure and stable “varieties” shaped by an industrial conception of agriculture. They draw on the concept of population used by geneticists and on the narrative of the commons to provide instead a dynamic conception of living matter evolving in close interaction with a community of farmers. Calling “peasant seeds” an ontology is an affirmation of the alterity of worldviews and the radicality of the RSP project. Yet the account of its emergence, through productive frictions with scientists and other activists, prevents us from essentializing or romanticizing it: this ontology must rather be read as the result of a political engagement and a practical activity—a “political ontology”.

Over the last few years, the RSP has gained institutional recognition from institutions. Its members, who are also involved in various farmers’ unions (La Confédération Paysanne, La Via Campesina), are present in political arenas where seed legislation and regulatory frameworks are discussed and shaped. Decision makers at the French and European levels now leave a space for such an alternative model of farming, in parallel with conventional agriculture. The difficulty that they have to face now is to translate “peasant seeds” into a juridical ontology. How to define them in a legal text? The expression “heterogeneous material” that currently appears in a draft of the European seed reform is incomplete, as it does not capture the collective and farmer-driven process. These debates about regulation are still in progress, but they already show the relative inertia of law and the difficulties of integrating into its stabilized categories the radical innovations of actors.

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Notes

1. It was incorporated into French law in 2011, but the implementation decrees have not been issued yet.
2. One of the tricks to get around the interdiction to circulate uncertified seeds between farmers has been to register under French law as nonprofit associations with the aim of “doing research on agrobiodiversity”, which can benefit from the research exemption.
3. This was made clear by a comment made by the head of the regulation service of the GNIS (Groupement national interprofessionnel des semences et plants, or National Interbranch Group for Seeds and Propagating Material) after the presentation of the activities of a farmer. He commented: “[F]or me, they are users [of genetic resources]. They cannot be providers.”
4. Such as the European project Farm Seed Opportunities, which was extended by SOLIBAM (Strategies for Organic and Low-Input Integrated Breeding and Management) and, more recently, ReSoRIV (Social and Legal Recognition of Plant Breeding for Organic and Peasant Agricultures).
5. For information about the most recent forum, in Basel in 2013, see <http://www.lldforumch2013.liberatediversity.org>; for general information, see <http://liberatediversity.org>.
6. Tentative initial names such as the European Coordination for Farmers’ Seeds or Coordinadora Europea de Semillas Campesinas can be found in the archives of the founding partners’ websites.

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